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TITLE: A SOLUTION OF METAL-POLYMER CHELATE(S) AND APPLICATIONS THEREOF

Amendment B: SUPPLEMENTAL REMARKS

The Applicant/Inventor summarizes the changes to the claims.

Claim 1⟿A solution of metal-polymer chelates(s) for static bio-carrier, containing at least one metal-polymer chelate~~s~~ for static bio-carrier

Claim1 have added"for static bio-carrier"⟿Structure⟿a. Main skeleton of the bio-carrier:

b. Two functional groups which tend to the opposite sides of the skeleton:

c.The structure of the well-mixing chelates is tend to chain-form which contains positive and minus polar functional groups beside it, the chelates can mix well with bio-protein:

Claim1⟿Specifications

⟿the form of the bio-carrier being selected from a gaseous state, powder, metal(s) of nanometer size, inorganic, organic/inorganic, fluid, semi-fluid, conductor(s), semiconductor(s), thin-film(s), fiber(s), chip(s), cells and bio-tissue(s).

Claim1 -30,41⟿Specificity

⟿whereby the metal-polymer chelates(s) solution for static bio-carrier is capable of assisting in a fermentation to preserve process

Claim1 ⟿minification have to make it more clearly defined

Claim2 ⟿~~amino group bearing molecules,~~ including at least one protein ~~amino acid~~.

Claim3 ⟿, including at least one monosaccharide bimolecules of monosaccharide derivatives.

Claim5 ⟿, ~~sodium, potassium,~~ rubidium, cesium, mercury, tin, zirconium, aluminum, thallium, antimony, bismuth, germanium, gallium, molybdenum, tungsten, yttrium, scandium, rhodium, iridium, technetium, osmium, ruthenium, rhenium,

vanadium, and indium.

Claim10 ~~→~~wherein the polymer bridging agent is comprised of ~~carboxyl group bearing~~ linear polymers ~~molecules and amino group bearing liner molecules~~.

Claim14 ~~→~~further comprises a ~~carboxyl group bearing plastic polymer and an amino group bearing~~ plastic polymer for use in a nano plastic industry application.

Claim22,25 ~~→excluding chitosans~~

Claim1-30,41 have added"for static bio-carrier"

Claim1-30 the result of the steps are kept consistent as presented earlier.

The Applicant/Inventor explains how Claim 1 can include limitations up to five decimal places. The Applicant/Inventor lists other changes to the claims.

Specification, Page14 4.2~~b~~. Oxidizing condensation solution:

Partially add (iron ions mixed with other kinds of metal ions) or separately add the foregoing 0.1~3% of metal ions or 0.1~100% of acidified, or chlorinated or hydroxidized (referring to nitrified sodium humate) or nitrified or inorganic polymers with bivalent iron ions that has an oxidizing capability for the gas. Manganese ions can be used as well, which constitutes an oxidized condensation solution.

0.1~3%×0.1~100% = 0.000001~ ----- = 0.0001%~ -----

Claim 1 0.0~~000~~1~ 19.9 percent hydroxyl group bearing compounds ~~polymers~~, including at least one carbohydrate molecule;

Claim 2 ~~a soluble hydroxyl polymer, and amino group bearing molecules,~~ including at least one protein ~~amino acid~~.

Claim 3 soluble carbohydrate ~~low molecular weight~~ molecules , including at least one monosaccharide bimolecules of monosaccharide derivatives.

Claim 4 further comprising;

including at least one alkali.

Claim 7 The solution of metal-polymer chelates(s) of claim 1 for static bio-carrier, wherein the hydroxyl group bearing compounds ~~polymers~~

Claim 8 The solution of metal-polymer chelates(s) of claim 1 for static bio-carrier, wherein the solution of metal-polymer chelate(s) after liquid-solid separation processing produces ~~obtains~~ the metal-polymer chelate, the metal-polymer chelates being selected from a group consisting of

Claim15 A method of using ~~T~~the ~~solution of~~ metal-polymer chelates(s) solution of claim 1 for static bio-carrier, in which the solution is ~~being~~ used ~~for~~ in an oxidation process ~~of~~ to produce~~ing~~ oxygen anions ~~, including at least one solvent degradations~~.

Claim 17 A method of using ~~T~~the ~~solution of~~ metal-polymer chelates(s) solution of claim 1 for static bio-carrier, in which the solution is ~~being~~ used in one of hydroxypropylmethyl cellulose mimic of ~~imitated~~ chitosan, and monosaccharide mimic of ~~imitated~~ glucosamine.

Applicant/Inventor presents a chart of differences between the prior art and the present invention

Prior Art	Present Invention
My case composition other than waste--⟿phosphorus compounds, compounds of phosphorus and nitrogen,preservatives, xanthan Gum, vitamin,PABA,buffer,EDTA, compounds of C and H(Non-carbohydrate), herbicide,pesticides,Lutein, carotene, agents,alkaloids, folic acid, riboflavin, nicotinic acid, pyridoxine, biotin,EDDA, EDDHA,HEDTA,CDTA,PTPA,NTA, proprionic acid, benzoic acid ,sorbic acid, indoleacetonitrile,indoleacetaldehyde, , isopentenyl adenine, dihydrozeatin, ----	Do not need to
Need to increase the preservatives fermentation Impede the fermentation	Do not need to
a variety of fermented ingredients⟿	Do not need to, Composed of 30,20,18,15,8 Only 6 species(ingredients)
Too much interference substances Free to determine the structure of Main skeleton of the bio-carrier:R-oH and Metal	Do not need to
Nutritional support on micro-organisms grow	Do not need to
Fermentation is not the real structure of the invention	

Fermentation bacteria problems:Impure many bacteria	Can be pure
Too much interference substances, no" static bio-carrier"	Can be pure "static bio-carrier"
Too much interference substances, degradation of bacteria has been change State.	Can be pure and stable state of preservation,and bacteria with high activity,and the number of high-potency strains.
in a fermentation to do not stability copy process and attenuation process and weak process	in a fermentation to do stable preserve process.
Too much OH-R-NH2 substances⟿Impact "OH-R"and"-COOHand-NH2"can not be formed ⟿Impede the fermentation⟿Cited the case of claim ⟿The concept of error	"OH-R"and"-COOH and-NH2" can be pure and fermentation.
Too much interference substances⟿ "monosaccharide molecules" will be containment ⟿Impede the fermentation	"Monosaccharide molecules" can be pure and fermentation.
Too much interference substances and "zn"⟿Bridge ⟿"Main skeleton of the bio-carrier" can not be formed⟿Impede the fermentation	"Zn"can be pure and fermentation.
Citric acid,EDTA⟿Seize the ion chelates(s)" can not be formed So do not precipitate	EDTA⟿"A solution of metal-polymer Impede the fermentation⟿

The concept of error "metal-polymer chelate" can not be separate from disaccharide molecules, monosaccharide molecules,

If there are asymmetric carbons in the chemical structure, the life of bacteria can be

maintained and a good duplicating capability is provided as well.

Binding factor	Linear combination of factor
Soil moisture	Other than the use of soil moisture,other applications.
clay⟿Soil	clay⟿Nano-use

Applicant/Inventor explains the additional recitation of the bio-carrier in Claim 1.

a. Main skeleton of the bio-carrier:

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A chemical compound having the same chemical conditions and functions as the chitosan includes a hydroxypropylmethyl cellulose (HPMC) and an amino group, and the metal ion acts as a medium for being a catalyst for the metal ions, such that the hydroxypropylmethyl cellulose (HPMC) can be mixed with NH_3. If the hydrogen of a R-OH functional group of the hydroxypropylmethyl cellulose (HPMC) is dehydrogenated and dehydrated by the metal such that NH_2 can be halfly bridged and combines with the hydroxypropylmethyl cellulose (HPMC) to produce R-NH_2. By then, this solution is a polymer hybrid having the same chemical solution, chemical state and chemical molecular structure as those of chitosan, and becomes an artificial imitated chitosan solution containing metal ions. The bacteria or enzyme or nucleic acid or partial cell body is developed to a long-life, high-concentration bacteria or enzyme or nucleic acid or cell body carrier. The imitated chitosan of the artificial imitated chitosan solution can be used in any area that the chitosan is used. The solution is fermented to produce a metal to a nano scale, and nano metal particles or nano metal oxides or nano complex metal oxides can be obtained by gas phase or liquid phase or combustion or carbonization methods. The imitated chitosan is developed into liquid crystal solution and other aspects for the applications in eight major enzyme systems. The principle for these eight major enzyme systems is similar to the principle described above. Regardless of having hydroxyl or hydroxyl and amino and/or carboxyl and/or carbohydrate polymer or disaccharide or monosaccharide or monosaccharide bimolecule, the imitated chitosan can be combined with the metal salts and then combined with carboxyl and amino groups to produce low to mid polymer metal-polymer cholates. Some enzyme systems use inorganic polymer carrier and/or plant fiber and/or carboxyl resin and amino resin or inorganic matter and/or enzyme system and the principle for the application in biochemical and nano areas. A chemical compound

having the same chemical conditions and functions as the chitosan includes a hydroxypropylmethyl cellulose (HPMC) and an amino group, and the metal ion acts as a medium for being a catalyst for the metal ions, such that the hydroxypropylmethyl cellulose (HPMC) can be mixed with NH_3. If the hydrogen of a R-OH functional group of the hydroxypropylmethyl cellulose (HPMC) is dehydrogenated and dehydrated by the metal such that NH_2 can be halfly bridged and combines with the hydroxypropylmethyl cellulose (HPMC) to produce R-NH_2. By then, this solution is a polymer hybrid having the same chemical solution, chemical state and chemical molecular structure as those of chitosan, and becomes an artificial imitated chitosan solution containing metal ions. The bacteria or enzyme or nucleic acid or partial cell body is developed to a long-life, high-concentration bacteria or enzyme or nucleic acid or cell body carrier. The imitated chitosan of the artificial imitated chitosan solution can be used in any area that the chitosan is used. The solution is fermented to produce a metal to a nano scale, and nano metal particles or nano metal oxides or nano complex metal oxides can be obtained by gas phase or liquid phase or combustion or carbonization methods. The imitated chitosan is developed into liquid crystal solution and other aspects for the applications in eight major enzyme systems. The principle for these eight major enzyme systems is similar to the principle described above. Regardless of having hydroxyl or hydroxyl and amino and/or carboxyl and/or carbohydrate polymer or disaccharide or monosaccharide or monosaccharide bimolecule, the imitated chitosan can be combined with the metal salts and then combined with carboxyl and amino groups to produce low to mid polymer metal-polymer cholates. Some enzyme systems use inorganic polymer carrier and/or plant fiber and/or carboxyl resin and amino resin or inorganic matter and/or enzyme system and the principle for the application in biochemical and nano areas.

b. Two functional groups which tend to the opposite sides of the skeleton:

From the description above, a carboxylic acid including a –COOH group dissolves chitosan or hydroxypropylmethyl cellulose (HPMC) or the R-NH_2 includes an amino group just like the humic acid already having a carboxyl group, so that the whole solution has the amino (alkaline) group as well as the carboxyl (acidic) group, and the so-called positive and negative molecules for driving the catalysis of the whole solution. In the formation of hybrids, the negative molecule and positive molecule are adjacent to each other and gradually developed to tens or hundreds of hybrid tissues, just like the form of protein tissues. The amino acid also has an amino (alkaline) group and a carboxyl (acidic) group, and they are connected linearly to form circular bond to provide a unique configuration for each protein. Since the hybrid solution and protein tissue provide a very good compatibility for the positive and negative charges and are

developed to carries of the protein substances such as cell, bacteria, enzyme, nucleic acid, DNA and RNA----

c.The structure of the well-mixing chelates is tend to chain-form which contains positive and minus polar functional groups beside it. The chelates can mix well with bio-protein:

This fermentation series such as hydroxypropylmethyl cellulose (HPMC) is a double helix structure formed by the fermentation (the hybrid structure not fermented is a single helix structure or this water soluble single helix structure can be used as a liquid crystal.

Finally, the fermentation to preserve process by adding⟿biological proteins comprising biological molecules⟿Composed of a total of six⟿Or by chemical point of view of functional groups，there are six components

Applicant/Inventor has prepared extensive analysis in support of each claim that can be supplemented at a later time or by request of the Examiner.